

**Notice of Allowability**

Application No.

10/509,478

Examiner

Mujtaba K. Chaudry

Applicant(s)

VAN DIJK ET AL.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/16/2006.
2. ☒ The allowed claim(s) is/are 1-14, 17 and 18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.


**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 10/12/2006.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**ALBERT DECADY**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

**EXAMINER'S AMENDMENT**

An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Applicants' representative, Dicran Halajian on October 3, 2006.

Please amend the application as follows:

**Please replace claim 1 with:**

A method of embedding an additional layer of error correction into an error correcting code, wherein information is encoded into code words of said error correcting code and wherein a number of code words are arranged in the columns of a code block, said method comprising the acts of:

reducing the length of each row of said code block by adding X row symbols together to form Y row symbols replacing the X row symbols, Y being less than X, to form shortened rows according to a predetermined adding rule resulting in a reduced code block;

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encoding the shortened rows of said reduced code block using a horizontal error correcting code to obtain horizontal parities, and embedding said horizontal parities as additional layer in said error correcting code.

**Please replace claim 12 with:**

An apparatus for embedding an additional layer of error correction into an error correcting code, wherein information is encoded into code words of said error correcting code and wherein a number of code words are arranged in the columns of a code block, comprising:

means for reducing the length of each row of said code block by adding X row symbols together to form Y row symbols replacing the X row symbols, Y being less than X, to form shortened rows according to a predetermined adding rule resulting in a reduced code block;

means for encoding the shortened rows of said reduced code block using a horizontal error correcting code to obtain horizontal parities, and means for embedding said horizontal parities as additional layer in said error correcting code.

**Please cancel claim 15.**

**Please cancel claim 16.**

### REASONS FOR ALLOWANCE

Claims 1-14 and 17-18 are allowed. The following is an Examiner's statement of reasons for allowance:

Independent claim 1 of the present application teaches, for example, a method of embedding an additional layer of error correction into an error correction code, wherein information is encoded into code words of said code and wherein a number of code words are arranged in the columns of a code block, said method comprising the acts of: reducing the length of each row of said code block by adding X row symbols together to form Y row symbols, replacing the X row symbols, Y being less than X, to form shortened rows according to a predetermined adding rule resulting in a reduced code block, encoding the shortened rows of said reduced code block using a horizontal error correcting code to obtain horizontal parities, and embedding said horizontal parities as additional layer in said error correction code. The foregoing limitations are not found in the prior arts of record. Particularly, none of the prior arts of record teach nor fairly suggest, "...reducing the length of each row of said code block by adding X row symbols together to form Y row symbols, replacing the X row symbols, Y being less than X, to form shortened rows according to a predetermined adding rule resulting in a reduced code block, encoding the shortened rows of said reduced code block using a horizontal error correcting code to obtain horizontal parities, and embedding said horizontal parities as additional layer in said error correction code."

Independent claims 12, 17 and 18 are directed to similar subject matter and include similar limitations of independent claim 1 and therefore are allowed for similar reasons.

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Dependent claims 2-11, 13 and 14 depend from allowable independent claims and inherently include limitations therein and therefore are allowed as well.

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***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mujtaba K. Chaudry whose telephone number is 571-272-3817.

The examiner can normally be reached on Mon-Thur 9-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Mujtaba Chaudry  
Art Unit 2133  
October 12, 2006

  
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